What is claimed is:

1. A semiconductor integrated circuit device for processing high frequency signals, to be mounted with another semiconductor integrated circuit device for processing baseband signals in a communication apparatus usable for wireless data communication, said integrated circuit device for processing high frequency signals, comprising:

a first measurement circuit for measuring a signal level of a received signal in said wireless data communication to output a first signal level measurement signal used for gain controlling.

2. The semiconductor integrated circuit device according to claim 1,

wherein said first signal level measurement signal output from said first measurement circuit is a logarithmically compressed signal.

3. The semiconductor integrated circuit device according to claim 1, including:

an addition block for adding up I and Q analog signals converted to baseband signals,

wherein said first measurement circuit measures a signal obtained by adding up said baseband signals in said addition block.

4. The semiconductor integrated circuit device according to claim 1, including:

an addition block for squaring each of said I and Q analog signals converted to a baseband signal, then adding up said squared I and Q signals,

wherein said first measurement circuit measures a signal obtained by adding up said squared signals in said addition processing block.

5. The semiconductor integrated circuit device according to claim 1, including:

an addition block for obtaining the absolute value from each of said analog I and Q signals converted to baseband signals, then adding up those I and Q signals having an absolute value respectively,

wherein said first measurement circuit measures a signal obtained by adding up said I and Q signals having an absolute value respectively in said addition block.

6. A wireless LAN system, comprising:

a first measurement circuit for measuring a signal level of a received signal in wireless data communication and outputting a first signal level measurement signal used for gain controlling;

a control circuit for switching between at least two antennas at every certain time if no signal is detected in received signal detection carried out according to the result

of measurement by said first measurement circuit, suspending said switching if a signal is detected to generate an antenna switchover signal for fixing the connection of said antenna that has detected said received signal; and

an antenna switch for controlling the switching between at least said two antennas according to an antenna switchover signal received from said control circuit.

7. A wireless LAN system, comprising:

a first measurement circuit for measuring a signal level of a received signal in wireless data communication and outputting a first signal level measurement signal used for rough gain controlling;

a second measurement circuit for measuring signal levels of inputted I and Q signals and outputting a second signal level measurement signal used for minute gain controlling;

a control circuit for generating a gain setting value according to said first and second signal level measurement signals output from said first and second measurement circuits;

a gain control circuit for generating first and second gain setting data according to the gain setting value output from said control circuit; and

a programmable gain amplifier for amplifying both I and Q signals according to said first and second gain setting data output from said gain control circuit.

8. The wireless LAN system according to claim 7,

wherein said gain setting values output to said gain control circuit from said control circuit are time divisional data.

9. The wireless LAN system according to claim 6, comprising:

a test signal generation block (gain control circuit) for generating a test signal according to a transmission circuit adjustment command; and

an adjustment circuit for measuring an output level of said transmission baseband amplifier according to a test signal output from said test signal generation block to adjust the output level of said transmission baseband amplifier so that said output level comes within a predetermined range.

10. An auto gain control system, comprising:

a measurement circuit for measuring a signal level of a received signal in wireless data communication;

a gain control block for calculating a gain of a programmable gain amplifier from a signal level measured by said measurement circuit and outputting the result as gain setting data; and

a programmable gain amplifier for controlling a gain used to amplify each of I and Q signals according to gain setting data output from said gain control block.

11. An auto gain control system, comprising:

a plurality of measurement circuits, each used for measuring a signal level of a received signal in wireless data communication;

a gain control block for outputting gain setting data according to a signal level measured by each of said plurality of measurement circuits; and

a programmable gain amplifier for controlling a gain used to amplify each of I and Q signals according to each gain setting data output from said gain control block,

wherein each of said plurality of measurement circuits has a measurement accuracy different from others, and

wherein said programmable gain amplifier uses said plurality of gain setting data sequentially in an ascending order of signal level measurement accuracy to make said controlling.

12. An auto gain control system, comprising:

a first measurement circuit for measuring a signal level of a received signal in wireless data communication and outputting a first signal level measurement signal used for logarithmically compressed rough gain controlling;

a second measurement circuit for measuring a signal level of each of inputted I and Q signals in a linear scale and outputting a second signal level measurement signal used for minute gain controlling;

a control circuit for generating a gain setting value according to said first and second signal level measurement signals output from said first and second measurement circuits;

a gain control circuit for generating first and second gain setting data according to the gain setting value output from said control circuit to make said gain controlling; and

a programmable gain amplifier for amplifying said I and Q signals according to said first and second gain setting data output from said gain control circuit.

13. The auto gain control system according to claim 12;

wherein said programmable gain amplifier is configured by three programmable gain amplifiers serially connected to each other,

wherein in two programmable gain amplifiers disposed in the front step, a gain is set which is respectively used to amplify said I and Q signals according to said first gain setting data generated from said first signal level measurement signal by said gain control circuit,

wherein in said programmable gain amplifier in the rear step, a gain is set which is used to amplify said I and Q signals according to said second gain setting data generated from said second signal level measurement signal by said gain control circuit.

14. The auto gain control system according to claim 13;

wherein each of said three programmable gain amplifiers is provided with a DC offset cancellation block for canceling an DC offset, and

wherein said control circuit outputs a DC offset cancel signal for canceling a DC offset generated upon switching among gains in said three programmable gain amplifiers.

15. The auto gain control system according to claim 10,

wherein said first and second gain setting data output to said programmable gain amplifier block from said gain control circuit are time divisional data.

16. The auto gain control system according to claim 12,

including:

a control circuit for determining whether or not a received signal is detected according to the result of measurement in said first measurement circuit and carrying out switching between at least two antennas at every fixed time if no signal is detected or suspending said switching between said two antennas if a received signal is detected, to generate a switchover signal for fixing the connection of said signal-received antenna; and

an antenna switch block for switching between at least said two antennas according to an antenna switchover signal received from said control circuit.

17. The auto gain control system according to claim 12, including:

a low noise amplifier for amplifying a signal received by one of said antennas,

wherein said low noise amplifier has a gain controlled according to the gain switchover data generated by said gain control circuit from a gain setting value according to said first signal level measurement signal.

18. An auto gain control system, comprising:

a second measurement circuit for measuring signal levels of inputted I and Q signals in a linear scale and outputting a second signal level measurement signal;

a control circuit for generating a gain setting value according to said second signal level measurement signal output from said second measurement circuit;

a gain control circuit for controlling a gain used to generate second gain setting data according to said gain setting value output from said control circuit;

a programmable gain amplifier for amplifying I and Q signals according to said second gain setting data output from said gain control circuit; and

a bypass switch for switching between destinations according to a switchover signal so as to transfer a signal output from a transmission baseband amplifier to said programmable gain amplifier at the time of signal transmission,

wherein said system switches over said bypass switch to output a transmit signal to said gain amplifier and instructs

said second measurement circuit to measure a characteristic error of each of I and Q signals output from said programmable gain amplifier to adjust the gain of said programmable gain amplifier.